

# Lloyds Bank Review

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*The Bank is not necessarily in agreement with the views expressed in articles appearing in this Review. They are published in order to stimulate free discussion and full inquiry.*

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# The Fund and the Future

*By The Hon. Maxwell Stamp*

MANY readers of this *Review* will remember the stimulating analysis of the Bretton Woods system which Sir Oliver Franks presented to the shareholders of Lloyds Bank and to the world at large earlier this year. Since the world-wide boom began to falter in 1957 there has been much discussion of the question whether the reserves of the world, particularly of countries outside the United States, are adequate to finance the growing volume of world trade; whether, in the words of Sir Oliver Franks, "they are now spread so thinly over the system as a whole that shortage of reserves might aggravate other deflationary tendencies, if these were to accumulate, and a minor recession be magnified into something more".

The payments difficulties resulting from Suez, the pressure on sterling which arose in 1957 and fears as to the effects of the American recession on the payments positions of other countries have focused attention on the problem. Under pressure from several member countries the International Monetary Fund itself has been engaged on a study of the subject for over a year; the study has not yet been published though it may well be available for this month's annual meeting of the Governors. Conversations have also been held between British and American Treasury officials on the problem, but no results are yet apparent. There is a fairly widespread belief that agreement has been reached that in principle the resources of the Fund should be increased by an increase in quotas.

We shall consider in this article whether such an increase is likely to be a good and sufficient solution for any shortage of world liquidity that there may be. In the meantime, the problem appears somewhat less urgent than it did when Sir Oliver Franks delivered his annual statement. The American recession has failed to develop into a slump and it looks as though it will not deepen further; business throughout the world is slowing

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down but there is as yet no sign of any catastrophic decline in world trade. However, the problem has not disappeared and this may be an appropriate moment, therefore, to take thought and attempt to devise an organization and institutional framework which will enable trade in the years which are to come to develop to the optimum extent.

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The widely held belief that the world's reserves of gold and foreign exchange are inadequate to the work they have to do is often based on the change in the relationship between the volume of reserves held in 1937 and the value of world trade in that year, compared with the situation today. This change is a convenient starting point for our analysis.

In any comparison between the pre-war period and the present day a feature which leaps to the eye is the great increase in the habit of holding reserves in the form of foreign currencies rather than solely in gold. In 1937, the countries of the world (excluding countries now behind the Iron Curtain) held 92 per cent. of their reserves in the form of gold: in 1957, gold accounted for only 62 per cent. Of the increase of gold and foreign exchange reserves, amounting to \$34,600 millions since 1937, \$21,300 millions—or over 60 per cent.—has been accounted for by increases in foreign exchange holdings (principally, of course, in holdings of dollars and sterling). In the case of dollar holdings this has been a voluntary development: official holders of dollars can freely convert them into gold. If they do not, it is because they find it more convenient to keep their reserves, or part of them, in the form of dollars rather than gold. Reserves held in the form of sterling are in a somewhat different category. Some holders of sterling balances are undoubtedly restrained from converting them into gold or dollars by the sterling area arrangements; but even if sterling were freely convertible it is likely that very substantial sums would continue to be held in the form of sterling balances.

This change in the form in which reserves are held is one of the factors which render difficult and misleading any comparisons between the pre-war and post-war situations. Whilst the use of the national currencies of the United States and the United Kingdom as media for the holding of reserves has made possible a considerable increase in the total of world reserves since before the war, the gold reserves of these two countries serve as backing for the dollar and sterling holdings of foreign countries as well as serving the normal purpose of reserves: that

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of smoothing out changes in the American and British payments positions. The short-term liabilities of the United States to foreigners (i.e. official reserves and private holdings of dollars), which might on demand be convertible into gold or other foreign currencies, have now reached the large figure of about \$17,000 millions and it is quite clear that a considerable proportion of the United States gold reserve must be regarded as earmarked for such an eventuality. The U.S. gold reserves are still very adequate but much less adequate than a simple consideration of their relationship to American foreign trade might suggest. The same applies to an even greater degree to the British position.

Comparisons with pre-war conditions are also rendered difficult by the problem of selecting an appropriate base-year in which the relationship between world reserves and world trade can be considered "normal". In 1937, the world's monetary gold supply was 105 per cent. of world exports, whereas in 1924 it was only 32 per cent. In 1957, the gold reserves of the world outside the Iron Curtain countries were 39 per cent. of world exports; and if foreign exchange reserves (which, as noted above, played a relatively insignificant rôle before the war) are added to the gold reserves, the percentage was 62. According to which base-year is taken, therefore, world reserves can be shown to have either increased or decreased in relation to the value of world trade. Comparisons with selected pre-war years give us little help in deciding whether present world liquidity is adequate to the world's needs.

The trend in recent years is more significant, as will be seen from the table below. The lesson is clear: unless the world finds techniques of economizing in international liquidity, strains at some stage will be introduced into the system which will have the effect of limiting the growth in international trade.

TABLE I

			1950	1954	1957
			\$ m.	\$ m.	\$ m.
(a)	Total world reserves	.. .. .	55,000	58,750	62,250
(b)	Total world imports	.. .. .	59,338	79,612	107,156
(c)	(a) as % of (b)	.. .. .	93%	74%	58%
(d)	World reserves outside U.S.A. and international institutions	.. .. .	24,380	27,957	30,243
(e)	World imports excluding U.S.A...	.. .. .	49,737	68,565	92,982
(f)	(d) as % of (e)	.. .. .	49%	41%	33%

The total value of a country's trade is one of the factors which govern the reserves it needs to hold: as its trade increases, a country will feel that its reserves are dangerously low unless they rise more or less in proportion, and will take action to increase them by cutting down imports and seeking to expand exports. But one country can add to its reserves only at the expense of another, unless the total quantity of reserves increases. If country A, whose reserves are inadequate, gains reserves at the expense of country B, whose reserves are also inadequate, the latter will take counter-action—and the volume of world trade and world industrial activity will suffer. In the light of the above table, it is not without significance that the value of world imports in the first quarter of 1958 was 6 per cent. below the figure for the corresponding quarter of 1957.

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Before we can decide whether the present slowing down in the growth of world trade is caused by the lack of world reserves we must consider some of the factors which affect the need for reserves at any particular time. Among these are the "Bretton Woods system" of fixed exchange rates, the movement towards restricting the freedom of individual countries to increase tariffs or impose quantitative restrictions, the impact of full employment, the growth in the power of trade unions and the consequent emergence in many countries of the world of the "ratchet" economy in which prices move up fairly easily but are resistant to pressures to bring them down. All these affect the working of the mechanism by which deficits and surpluses in the balances of payments of individual countries are adjusted; all affect, therefore, the amount of reserves which a country needs to hold.

It must be remembered that the holding of reserves in excess of needs involves a "cost" to the country holding them. They earn nothing or little, whereas, if the resources which they represent were put to constructive use, the incomes of the countries owning them would be correspondingly increased. Wealthy countries such as the United States of America can perhaps afford to neglect this element, but for the under-developed countries of the world there is a constant temptation to use reserves for the building up of new industries and for the expansion of their economies to meet the needs of their ever-growing populations. On the other hand, inadequate reserves also involve a cost: if, for instance, the inadequacy leads foreigners to distrust a currency, or if a country is obliged

to delay its commercial payments because of inadequate foreign exchange resources so that it can no longer trade on the most advantageous terms and is driven to barter deals, exchange auctions and other devices.

It is difficult to put a precise figure on the level of reserves which any country "ought" to keep, just as it is difficult to say that there is a precise amount of insurance which any particular individual "ought" to carry: if the figure is too low his family would be left dangerously unprovided for in the event of his death, if it is too high the cost of premiums would bear too heavily on his current income. But the continued existence of exchange and trade restrictions, delays in payment, unwillingness of foreigners to invest and periodic exchange crises in one country after another suggest that the reserves which many countries in the world keep are too low and that they would derive real benefit from an increase.

The primary function of reserves is to enable a country to continue to pay for its imports in the face of a falling off in its income from abroad and to finance any unexpected withdrawal of foreign-held assets from its economy. The greater the danger of such a falling off in external income, and the greater the respective magnitude, the larger will be the reserve a country needs to keep. Similarly, the longer the time-lag involved in cutting down imports or in stimulating exports to restore balance, the greater the reserves necessary. On the capital side, the larger the foreign balances which can be withdrawn, the greater the ease of withdrawing them and the greater the possibilities of speculation against a currency, the larger the resources that would be needed to stem the tide. Reserves are a means of buying time to enable corrective action to be taken; the more effective the weapons of correction at the disposal of the authorities, and the greater their willingness and ability to use them energetically, the lower the reserves which need be held. Finally, the larger the sources of credit available to a country, the less need there is for the country itself to hold large amounts of gold and/or foreign exchange.

In some respects the need for reserves has probably decreased since before the war. The acceptance of the idea that full employment at a high level of activity is not only desirable but a practical possibility means that it is much less likely the export incomes of most of the countries of the world will fall as fast or as far as they did in the 'thirties. There is little doubt that any serious world-wide recession would be countered by international action on a large scale; but, even without this, the

separate anti-recession measures of individual countries, by maintaining incomes in those countries, are likely to sustain the volume of their imports, and hence the export incomes of other countries, to an extent which did not happen before the war. Moreover, just as the availability of overdraft facilities at a bank enables a private individual safely to run his current account balance at a lower level than if such facilities were not available, so the ability of a country to obtain credit from the International Monetary Fund, from EPU, or from the U.S. government or its agencies enables it safely to operate on lower reserves.

On the other hand, various factors work the other way. Before the war it was politically possible to redress imbalance in external payments by deflationary action at home, working on the level of incomes as well as on employment. Today, large-scale unemployment is politically intolerable and resistance to wage decreases much greater: even in a recession the general price level no longer falls. It seems that the limit of what most modern governments can do is to prevent inflation for a short period: real deflation is impossible. Consequently, the classic weapon for redressing an external deficit is blunted. So long as the rest of the world is inflating, not to inflate—or to inflate more slowly than the rest of the world—may be sufficient to turn a modest external deficit into a surplus. But if the rest of the world is also having a pause in the inflationary process this may not be enough; the process of getting external accounts into balance may take some time and call for large reserves.

Another weapon, largely forged during and since the war, is also being blunted: the use of quantitative restrictions. The quickest way of redressing external imbalance on current account is undoubtedly physically to prevent the entry of a sufficient quantity of imports by direct controls. The machinery for doing this is gradually being dismantled, partly because of pressure from international institutions, but even more because it is becoming evident that quantitative restrictions introduce wasteful distortions into a country's economy. Under the protection of quantitative restrictions, uneconomic industries spring up to fill the frustrated demand and resources are drawn off into these industries from the unprotected and more efficient export industries. When times are good, therefore, governments tend to dismantle the machinery of quantitative restrictions; once dismantled, it cannot be rebuilt overnight. In the use of quantitative restrictions speed and secrecy are essential. The mere rumour that they are to be imposed will cause a rush of imports and worsen the immediate payments position. Tariffs,

another weapon for cutting down imports, are also subject to international agreement and cannot easily be raised without provoking retaliatory action. It is significant that in the sterling crisis of last year neither an increase in tariffs nor an increase in quantitative restrictions was apparently considered a reasonable and effective solution.

Finally, it must be noted that the Bretton Woods system of fixed exchange rates probably entails the holding of higher reserves than would a system of fluctuating exchange rates. If a country is bound to support its exchange rate, it must have the wherewithal to do so. This is not the occasion for an exhaustive study of the relative merits of fixed and flexible rates. Suffice it to say that for countries, like the United Kingdom, whose currencies are widely held abroad—which are in fact in the position of bankers—fluctuating rates seem to have overwhelming disadvantages. Depositors are inclined to look askance at a bank which says that the value of the deposit will vary according to the way the bank is prospering, or whether other customers are simultaneously deciding to draw down their deposits.

Moreover, it is, I think, significant that other countries, whose currencies are not held as reserve currencies, with a few exceptions such as Canada and some Latin American countries, adhere of their own free will to the fixed par value system. Even a country such as Italy, which has never agreed a par value with the Fund, and whose currency is in theory free to fluctuate, in fact has kept her currency quite stable for ten years. Countries are afraid that a temporary fall in the external value of their currency will cause a rise in prices at home which will remain as a permanent legacy even if their currency appreciates once again; the fight against inflation in the ratchet economies of today is so difficult that none can afford to add to their difficulties by allowing significant fluctuations in the external value of their currencies.

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To assess the quantitative effect of all these factors is difficult if not impossible; but one is left with the impression that no factors are at work which would permit countries to manage with reserves which, year by year, are lower in relation to the value of their trade. As world trade expands the size of the "swings" to be settled by the use of reserves will therefore increase proportionately, and at some stage, if present trends continue, reserves will be inadequate.

It seems highly probable that world reserves are already inadequate: for despite the widespread recognition of the advantages that would flow from convertibility and the abolition of exchange restrictions, the majority of countries in the world are not able to attain these objectives. Only eleven of the sixty-seven members of the International Monetary Fund have accepted the obligations of Article VIII; and while substantial progress has been made in the dismantling of exchange and trade restrictions by many countries, a considerable "hard core" of restrictions remains, as the annual report of the Fund on exchange restrictions bears witness. Lack of adequate reserves is the usual reason given by members when each year they justify to the Fund the continuance of their restrictions; and the Fund, albeit with some misgivings, accepts the justification.

The existence of these restrictions has undoubtedly already exercised a restraining effect on the growth of world trade. If its effect has not been greater it is because most countries of the world were undergoing domestic inflation since the war, so that those countries which were out of balance could right their position by relatively painless remedial measures. If the world runs into a slump, there seems little doubt that the protective action which shortage of reserves would force many countries to take would be very liable to intensify it.

The other side of the equation is, of course, the supply of reserves in the past and in the future. Reserves have been increasing at quite a substantial rate, even if not so fast as the value of world trade. Since 1937, the world total of reserves of gold and foreign exchange has increased from \$27,650 millions to \$62,250 millions. Holdings of gold have increased by \$13,300 millions—an average of about \$660 millions a year. Of this about \$1,500 millions is held by the international institutions—IMF, EPU and BIS. Of the increase in foreign exchange reserves of \$21,300 millions since 1937, about \$7,500 millions is represented by the currency holdings of the international institutions.

The U.K. and the U.S. between them, therefore, have supplied about \$13,800 millions of extra reserves to the world (excluding the amounts of their currencies held by the international institutions), at an average rate of about \$700 millions a year. The increase in sterling balances held as reserves as a result of the war accounts for the equivalent of about \$5,000 millions. Sterling balances held as reserves have, however, declined since 1950 by about the equivalent of \$2,000 millions and it appears probable that they will, on balance, not increase



in the near future: the world cannot look to sterling to supply extra liquidity. Future increases in world reserves must come from new gold production and from increased holdings of dollars by foreigners.

In the absence of an increase in the price of gold or the discovery of new sources of supply, no dramatic increase in new gold production is in prospect, so that additions from this source and from Russian gold sales will probably continue to be within the range of \$500-800 millions a year. The annual addition to the non-dollar world supply of dollars is more problematical. In recent years, the short-term liabilities of the United States to foreigners have been increasing by about \$1,000 millions a year; the current account surplus of the United States has been more than offset by the export of capital and by foreign aid.

Rather more than half of the additional dollar holdings seem to have gone to swell the official reserves of foreign governments. If to the approximately \$17,000 millions of short-term liabilities of the U.S. we add the \$7,000 millions of medium-term assets and stock exchange securities held by non-U.S. residents (which might be sold and the proceeds withdrawn), it would seem that the U.S. gold reserves no longer provide complete cover for her liabilities.

The liquidity position of the United States is still, by any normal standards, comfortable; but the debt has now reached a size when it must be considered seriously by the U.S. authorities, particularly since about \$11,500 millions of the \$21,400 millions of gold reserves are by law earmarked as backing for the Federal Reserve notes in circulation within the United States and Federal Reserve deposits. Conversion on a modest scale of dollars into gold by foreign central banks this year caused a fall in U.S. gold reserves which has occasioned considerable comment in the American press. The world cannot indefinitely count on American willingness to run further into debt without a corresponding increase in the cover for that debt.

Even if the size of dollar balances does not lead the U.S. authorities to take deliberate counter-action in the next few years, it is of course not certain that they will increase. Foreign aid may decline; U.S. investment abroad may be increasingly offset by service payments on past investment; troubles of the "Suez type" may cause foreign countries to buy more from the United States without a corresponding increase in U.S. imports; pressure from protectionist groups in the United States may lead to higher tariffs. It would be unwise to assume too readily that

the growth of dollar balances will continue on the scale of recent years.

In summary, therefore, it appears that in the past ten years the world's need for reserves has been increasing faster than the supply of reserves. We cannot count on the supply continuing to increase even at its present inadequate rate; indeed there are grounds for thinking that some slowing down in the rate at which reserves increase is very possible, unless the U.S.S.R. steps up its rate of gold sales. Whilst the position is not yet desperate, it has probably already exerted some restrictive effect on the growth of world trade and there is a real need, before the problem gets too urgent, to set up now a means of increasing the liquidity of the world as a whole which is independent of the vagaries of the United States balance of payments, and does not depend on the willingness of the United States to go into debt to the rest of the world on an ever increasing scale.

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The desiderata for any new device for increasing world liquidity are: (1) that it shall be flexible, (i.e. not of a once-for-all nature, but capable of continuous adjustment to meet the changing needs of the future), (2) that it shall be fair as between countries, (3) that it shall have the maximum effect where it is needed but cause as little disturbance as possible elsewhere, and (4) that, in the troubled times in which we live, it shall not weaken the position of the West *vis-à-vis* the Communist world.

It is sufficient to make this catalogue to bring out the disadvantages of one of the solutions commonly discussed: namely, an increase in the price of gold. Of these it must suffice here to mention three. First, an increase in the price of gold would benefit those who hold their reserves in the form of gold; those who hold their reserves in foreign currency would not gain. Secondly, if the price were once changed it would be generally assumed that the factors which had necessitated the increase would continue to operate, and that at some date in the future a further increase would be necessary. Hence, countries would become reluctant to hold their reserves in currencies that would no longer be regarded, in terms of stability as a store of value, as equivalent to gold. The effective total of liquidity might in fact be actually reduced by a rise in the price of gold.

The third disadvantage is one of mechanics. Under American legislation, the U.S. Director of the Fund is bound to vote against a proposal for an increase in the price of gold



unless he is instructed to the contrary by an affirmative resolution of both houses of Congress. The Articles of the Fund say that such a proposal can be vetoed by any member holding 1/5th of the total voting power of the Fund—which, of course, gives the U.S. a veto. Since American opinion is firmly opposed to an increase in the gold price, a considerable campaign in its favour on the part of the Administration and others would be needed before there could be any chance of the passing of the necessary Congressional resolution. Imagination boggles at the havoc that would be caused in the currency and commodity markets of the world while such a debate was in progress: at the least, a suspension of gold sales by the United States would be necessary, and the pressure on sterling and other currencies which can indirectly be converted into gold would be intense. A rise in the price of gold might become possible in a deep slump or in crisis conditions. It is, in my view, not practical as a deliberate solution to a moderate shortage of world liquidity.

To increase world liquidity through the International Monetary Fund, however, does not suffer from these disadvantages and is a far more promising line of approach, though the practical difficulties are considerable. From what has been said above, it will be seen that large reserves would not be necessary if countries which are in surplus were to relend that surplus immediately to countries which are in deficit; the surplus countries do not do so on a sufficient scale because they prefer to hold gold or dollars rather than the obligations of foreign countries—especially when these countries are in deficit. Lending through the Fund is much less risky: creditors then lend to the world community rather than to individual countries. The problem of the credit-worthiness of the deficit country is not solved, but the risk is shared. We have, then, to devise a mechanism for persuading countries which are in surplus to lend their resources to the Fund, and for distributing the resources available in the least risky and most efficient way once they are in the Fund's possession.

The measure which is in fact most likely to be adopted is to enlarge Fund quotas. The increased subscriptions involved might be payable either wholly in members' currencies or partly in gold and partly in national currencies.

In the first case, the Fund would receive a "mixed bag" of the currencies of all its members, for many of which currencies it has little if any use. It derives no income from its holdings of these currencies, since unused currency balances are held in the form of non-interest-bearing Treasury obligations of the country

concerned. The Fund's holding of members' currencies, other than U.S. and Canadian dollars and Deutschmarks, are in all cases as great as or greater than their original subscription. Because of the Fund rule that repayments must be made in gold or convertible currencies most countries are reluctant to draw "soft" currencies, even if they need them for making payments. As a result, the Fund's holdings of currencies other than those mentioned are not at present being used, and comparatively little use has been made of them in the past.

A quota increase with subscriptions in national currencies only would, therefore, be a thinly disguised means of increasing the U.S. and German contributions to the Fund without any corresponding contribution of "hard" currencies from others. In view of the world payments situation, it can be argued that such an increase would be justified, since the U.S. and Germany are the major creditors. Nevertheless, it is likely to be opposed by the United States, who will probably insist that a proportion of the increased subscriptions shall be paid in gold or dollars. For this they would have firm justification in the Articles of Agreement. Such a transfer of gold and dollars would, however, bear hard on countries which have relatively large quotas but weak reserve and balance of payments positions.

In fact, an increase in Fund quotas is only a means, and an inefficient one, of persuading those countries with the largest reserves and payments surpluses to lend reserves to the Fund and hence to the deficit countries. It suffers from the basic disadvantage that to the extent that it makes possible increased drawings of U.S. dollars from the Fund the liabilities of the United States to foreigners are increased without a corresponding increase in the U.S. reserves which serve as cover for these liabilities. An increase in Fund quotas is not only an inefficient means of tackling the problem; it is also rather inflexible. Like an increase in the gold price, it is a "once-for-all" measure. Because of the limitations to the willingness of the U.S. to increase its subscription to the Fund, and to the willingness of other countries to part with their own precious gold and dollars to the Fund, it is most unlikely that the increase in quotas will be on a sufficient scale to cater for the future needs for world liquidity. The total gold received by the Fund from members and from the original subscriptions was worth \$1,675 millions; the U.S. currency subscription was \$2,062 millions. An increase of 50 per cent. in quotas would, therefore, on the same basis add approximately \$1,850 millions to the gold and U.S. dollar resources of the Fund. This can hardly be called

an impressive *masse de manœuvre* for the tasks which may lie ahead.

It must also be noted that the non-dollar countries of the world would have to surrender to the Fund approximately \$500 millions of their present gold reserves. In theory, their increased drawing rights on the Fund should more than compensate for this, but psychologically there is a difficulty. Most members are not accustomed to count their gold subscriptions to the Fund among their reserves. It is true that they have virtually automatic access to the "gold tranche" of their quota; but somehow it is not quite the same as having the gold in their own central banks, where they can get at it in case of need without the procedure of going to the Fund Board, with its weighted vote and habit of asking inconvenient questions.

On the other side of the ledger, if the U.S., for example, sees its currency subscription to the Fund drawn down by other countries it also makes no allowance in its reserve figures. This also is illogical, since in case of need the U.S. would in those circumstances have a right to acquire from the Fund at the current par value any other currencies held by the Fund.

The only reason why gold is prized as a reserve medium is that it is always freely exchangeable in an emergency for any currencies which are necessary. Logically, countries ought to count in their reserves not only their gold subscription but any net drawings of their currency by other members of the Fund. They might then feel less worried when the Fund's holdings of their currencies were drawn down. If the U.S. and other countries agreed to do this, several problems would be eased: for example, the financing of the Treasury bills which the Fund encashes when a currency is drawn, and the legal requirements about borrowing limits and the amount of gold which has to be kept as backing for the U.S. currency.

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A modest reform along these lines would help, but an increase in quotas would still not solve the problem of increasing world reserves without increasing the liquidity problem of the United States, nor would give the Fund the resources which may be necessary. For this, it is necessary to give the Fund credit-creating power.

There are two possible ways of doing this. The first is that suggested by Sir Oliver Franks: for members to deposit with the Fund part of their gold and foreign exchange reserves, settling their international accounts by means of drafts on their

balances with the Fund. The Fund could then create credit like a normal bank, by granting drawing rights or overdraft facilities in excess of its gold and cash holdings.

The second method would be for countries to keep their present reserves, but to agree to accept certificates of indebtedness from the Fund in settlement of international accounts, and to treat these certificates in all respects as though they were gold. They would be made convertible into gold or foreign currencies in specified circumstances, but normally there would be no need to convert them: they would be held in reserve or tendered in payment as necessary, in exactly the same way that gold is now used internationally, or that bank deposits are used for domestic transactions. We should then have an automatic means by which countries in balance of payments surplus would lend that surplus, not to individual countries, but to the world community as a whole. We should have at our disposal a means of increasing world liquidity which could be turned on or off as the economic circumstances of the world required and which would not be dependent on the chance of a perpetual American payments deficit and the supply of new gold.

The main difference between these two schemes is that under the first the backing for the credit-creating power of the Fund would be its increased holdings of gold. Under the second, the basis would be the agreement of members to treat the Fund's certificates as though they were gold and to ask for conversion into gold only under defined circumstances: e.g., to make payments to countries which are not members of the Fund.

Under the first scheme, the Fund's credit-creating power would be limited by the amount of gold deposited with it and by its judgement as to the amount of credit which could prudently be created against its gold holdings. Under the second, the credit which the Fund could create would be precisely what its members, acting through the Board of the Fund, decided was appropriate to the world situation. Both schemes ultimately depend on the willingness of members in surplus to trust the Fund, either by refraining from withdrawing credit balances or by being willing to hold Fund certificates. Under the first scheme, they would depend on the ability of the Fund to pay cash on demand—because they considered the liquid resources of the Fund adequate. Under the second, they would trust the Fund because there was international agreement to do so, to treat Fund certificates as if they were gold.

Perhaps a compromise could be devised which would be an

improvement on either scheme. Not until the debate is joined, and it becomes clear whether Fund members prefer to deposit surplus reserves with the Fund or to hold Fund certificates as part of their reserves, will it be possible to see which of the schemes has the better chance of acceptance. But either would be an improvement on present arrangements. The important thing is to endow the Fund with credit-creating power considerably in excess of its present very limited potential. Once the principle is agreed, the precise method to be adopted is a matter of financial mechanics.

Now for the difficulties. Either of these proposals would require a major change in the Articles of Agreement of the Fund. Such a change would have to be accepted by three-fifths of the members, representing four-fifths of the total voting power. Most members would require fresh domestic legislation before they could agree to such a radical change in the Fund's powers. It would, to put it mildly, be a long and difficult process. But it would, I think, be unduly pessimistic to dismiss the proposal as impracticable: given an awareness of the need—and particularly if members of the Fund were faced by falling world trade, by balance of payments problems for several member countries and by an apparent inadequacy of the Fund's resources—the necessary agreement might be obtained much more rapidly than now seems likely.

Perhaps a more deep-seated difficulty is the "horse and water" problem. The Fund might be given the power to create credit: but would it find members who wished to borrow and were sufficiently credit-worthy? Like the yokel at the aquarium who said to his girl "If I had all them arms couldn't I hug and squeeze 'ee", only to be met by the reply "Get along with thee, thou doesn't use the two thou's got", the Fund's existing resources until recently have been comparatively little used. Only in the past year has there been any suggestion that the Fund might have to curtail its operations because its resources were inadequate; and over the next two or three years its gold and dollar resources may be expected to rise again as the U.K. repays its "Suez" drawings. The Fund in fact lends "on note of hand alone", against non-interest-bearing Treasury bills issued for the purpose by the drawing member, and against a somewhat vague promise to repay within "three to five years"; and like all lenders without adequate security it feels it has to be correspondingly cautious.

Now, a country can get into balance of payments difficulties, and hence need to draw on the Fund, for various

reasons which fall into three main groups: temporary and self-correcting; temporary but resulting in a permanent loss of reserves; and permanent changes in circumstances.

An example of the first would be that of a raw material producing country whose export income fell because of the inventory cycle in manufacturing countries. If the demand for, say, copper, falls because inventories in the U.S. are being run down, it may be expected that in due course demand will revive and indeed rise above "normal" when inventories are built up again. This is a clear case in which timely help from the Fund can enable the raw material country to maintain its purchases from abroad and thus avoid adding to recession outside.

An example of the second class is a harvest failure in an agricultural country. Since one year's harvest has little effect on the next, it would be foolish to assume that the loss involved on a bad crop will be offset by a harvest which is above normal next year. The farmers are in fact permanently poorer because of a bad crop to the extent of the income they have lost in that year. If the country maintains its imports in the bad year by drawing on the Fund, there is no assurance that its export income in future years will increase sufficiently to enable it to maintain its current rate of imports and to repay its debt to the Fund. Its government will have to cut down imports in the succeeding "normal" years in order to do so. In most cases, however, this will be an appropriate case for a Fund drawing—to spread the decline in purchasing power over a number of years.

The third class is represented by a permanent fall in demand for a country's products. If the main export trade of a country is coffee, and world taste changes or rival countries undersell it, to draw on the Fund will merely postpone the day when the country's imports must be cut and the inevitable adjustments be made. Similarly, if a country gets into difficulties because it is inflating faster than the rest of the world, to draw on the Fund will encourage the member to continue its "rake's progress" and to continue to import more than is in the long run justified. But even here there are complications. If the inflation is caused by "too" vigorous a development programme and the excess imports are being invested in highly productive development, it is possible that in a year or so the extra production for export resulting from the development may right the situation. Certainly, many countries take this view of their development programmes. They may be over-optimistic; but such is the need for vigorous growth in the under-developed countries that they are perhaps entitled to the benefit of any reasonable doubt,



especially when the alternative would be a cutting down of orders for imported capital goods that would in itself lead to unemployment and unused resources in other countries.

The Fund, then, is in a difficult position. Like every lender it must look to the credit-worthiness of its borrower; but unlike most domestic lenders the Fund has no security other than the word of a borrower that it will be repaid, and it cannot in the last resort collect its debt by action in the Courts. It is not meant to be a charitable organization or to make grants, nor even to be a source of long-term development capital—that is the function of the International Bank. Yet there is obviously a danger that what starts out as a short-term credit will not be repaid on the due date and will become frozen. The Fund's only real sanction, now, is that if a country were to "default" it could hardly look for further drawings should these be necessary. And members are very touchy about "discrimination"; none will recognize that they should be treated by the Fund any less favourably than their neighbours.

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It may well be argued that the Fund should take greater risks than in fact it does; doubtless, if its resources were greater it would be more inclined to do so. The "virtually" automatic right of drawing might be extended to cover the second or third credit tranche of the quota. But for the Fund to play a more decisive rôle more far-reaching changes are necessary. These might be in three directions: changes in the security the Fund receives for its credits; the setting up of a mechanism by which longer-term credits could be given, possibly in conjunction with the IBRD and the International Finance Corporation; and perhaps the setting up of a mechanism to aid productive movements of private capital.

The first task is to improve the security which the Fund receives for its loans. The Fund has already power under Article V, Section 4, when a country is requesting a waiver of the conditions under which drawings may be made (in particular a request to draw more than 25 per cent. of the country's quota at one time or for drawings which would bring the Fund's holdings of a member's currency above 200 per cent. of its quota), to "take into consideration a member's willingness to pledge as collateral security gold, silver, securities, or other acceptable assets having a value sufficient in the opinion of the Fund to protect its interests and may require as a condition of waiver the pledge of such collateral security." The clause has never been

utilized, probably for the reason that a member having gold reserves to pledge will probably prefer to use them directly, rather than pledge them and pay interest on an equivalent amount drawn from the Fund. But the question of finding "other acceptable assets" merits further study by the Fund. On a small scale, the pledge of commercial bills which had been rediscounted by a central bank might be acceptable security; a country might rediscount with the Fund its own Treasury bills with a definite repayment date and bearing a rate of interest; it might give a pledge of certain tax revenues or a first mortgage on a State-owned industry. It should not be beyond the wit of man to find assets other than gold the security of which would "protect the Fund's interests" and enable it to grant credit much more freely than at present.

For the longer term, if circumstances were such that the world economy needed some positive stimulus (e.g. because of widespread unemployment or under-utilization of resources) the extra credit created by the IMF could be put into circulation through the IBRD. The latter has the original subscriptions of members but for further loans it must depend on borrowing in the private market or on loans from member governments. There would seem to be no reason why its funds should not be augmented by loans from the IMF. The IBRD already has an effective mechanism for choosing projects which are likely to add to the wealth of the countries sponsoring them and which will in the long run be repayable out of that extra wealth. Through the IBRD, the IMF could assist those countries which in the absence of help would be in temporary balance of payments difficulties because of their development programmes.

The IMF could also work through the International Finance Corporation to assist private industry. The IFC has limited resources, and much smaller reserves and borrowing powers than the IBRD. So far it has made a slow start: to uncover suitable projects takes time and the Corporation is far from having committed its present resources. Part of the reason is that it must depend for future funds on building up reserves and disposing of its assets in the market. At this stage, it cannot afford to take risks; if it had access to a further source of funds in the form of loans from the IMF it might be emboldened to follow a less conservative policy. In the event of a severe world recession, the IFC and the IBRD could stimulate investment in many countries by offering loans at low interest rates—provided they had been liberated from the need to raise every penny in the market.



Finally, the Fund might be adapted to play a useful part in assisting private capital movements. At present, if a United Kingdom company wishes to invest in, say, Canada, the British authorities, after giving the necessary permission, will sell the necessary dollars in exchange for sterling. They get the sterling, the British company gets the Canadian asset—and the dollar reserves are reduced correspondingly. There is a presumption that the earnings of the Canadian asset will, ultimately, more than replace this loss to the reserves; but in the meantime the liquidity of the U.K. is reduced.

Is there an alternative? One possibility would be for the Fund to sell Canadian dollars (or Fund certificates, which the United Kingdom company could then change into Canadian dollars) to the United Kingdom company for sterling, with an undertaking on the part of the company to repurchase the sterling over a period of years out of the Canadian dollar profits of its new acquisition. Security against failure to carry out this undertaking could be given to the Fund in the form of a mortgage on the assets of the Canadian company. In this form, the transaction would involve no loss of liquidity to the British exchange reserves. Whilst national exchange authorities could not be expected to be indifferent to transactions of this nature, and their approval would continue to be necessary, they might be expected to take a more liberal view than they do at present, and constructive capital movements of the kind would be facilitated throughout the world.

This would, of course, be a very radical change in the Fund's functions: hitherto it has dealt only with member governments and not with individuals or private companies. Because of this, it would probably be simpler to set up a new institution, subsidiary to the Fund and nourished by it, to deal with private capital transactions in this way. Alternatively, it might be possible to add this rôle to the existing functions of the International Finance Corporation. Other techniques can doubtless be devised to enable the Fund or other international institutions to play a part in overcoming transfer difficulties in productive international capital movements and thereby to facilitate the best and most economical use of the world's resources.

I have not so far mentioned the rôle which the interest rates charged by the Fund and the Bank might play in stimulating or restraining world trade and world economic activity. This is a complex question and there is no space to consider it in detail in this article. Suffice it to say that a low rate of interest would

encourage countries to borrow while a high rate would discourage borrowing and encourage repayment. There would appear to be far more scope for the Fund to take an active part in forming the general climate of the world economy through a more active and flexible use of the interest rate weapon than has been the case hitherto. If in addition the lending rates of the IBRD were released from their present direct connection with the rates the IBRD has to pay on money borrowed in New York and elsewhere, the Bank would be able to play a more dynamic part in the control of world economic conditions.

### CONCLUSION

We have now reached the end of our journey into the land of "what might be". There does appear to be a problem of world liquidity: it is extremely difficult to measure its dimensions and to decide whether it has so far had any restraining effect on the growth of world trade and economic activity. If it has not so far had a serious effect, this appears to be due to circumstances (in particular, the American programme of foreign aid and willingness to incur debt to foreign countries at the rate of about \$1,000 millions a year) on the continuance of which it would be unwise to count. We may well be faced in the next few years with a need to apply a stimulus to the growth of world economic activity. There is an urgent need to equip ourselves with the instruments through which this stimulus could most efficiently be applied if that were required. It is also necessary to endow the Fund with resources which are really adequate to help any country in temporary balance of payments difficulties, so that the authorities of that country may have time to put their house in order.

All these factors suggest the need to liberate the world from its dependence on the annual output of gold and the chance that the U.S. will continue to run an unfavourable payments balance: the need, therefore, to make the Fund into a credit-creating institution, able to play a real part in guiding the economic destinies of the world and so give the world greater control over its economic destiny.

A. M. Stamp.

*London,*  
*August, 1958.*

# The Changing Oil Situation

By Duncan Burn

## I

### POST-WAR TRANSFORMATION

THE calmness over oil supplies when the latest Middle East crisis was at its peak contrasted astonishingly with the alarms and excursions at the time of the Suez crisis. Has the oil situation changed—or been changed—for the better, from a British and European standpoint? Or have we got it in better perspective? Or are we just lulled by recession?

The oil trade is the largest international commodity trade. Its expansion since the second world war has depended greatly on the increase of Middle East supplies. It is easy to forget how quick and recent this has been. Possibly it has been easier in Britain than elsewhere to overlook the recentness of the growth because we have for so long been connected with it. The British government has been a large shareholder since 1913 in what was first the Anglo-Persian Oil Company (and is now British Petroleum), and this shareholding was taken up as a security of oil supplies for the navy. The sense that Middle East oil is a vital reserve was established as a tradition long before the great growth of the Middle East oil industry had begun.

Nevertheless, in 1937 the Middle East produced 15.9 million tons of oil—little more than 5 per cent. of world supplies. In 1947, it produced 42.2 million tons, in 1951 97.2 million tons, and in 1957 about 180 million tons—nearly a quarter of the world output. This rate of growth has considerably outstripped that of the Caribbean, the other major source of exports of crude oil. After this expansive period, security of war-time supply was no longer the major source of interest for Britain, or for Europe, in Middle East oil. The whole of Europe became, as these supplies grew, almost exclusively dependent on these sources for oil. Europe came to use oil increasingly, not only for the expanding use of motor transport, and for ships, but as a fuel in place of coal (or gas or electricity made from

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coal). It remains a marginal supply for this latter purpose—but often an important margin; and for many applications in this category oil is found to be the better fuel.

This was a dramatic change. Before the war most of Europe's oil came from the Western hemisphere. Europe, outside Rumania, had little oil which could be worked commercially by pre-war techniques. From the end of the war the international pattern changed in two ways: first, the source of oil was changed, as indicated and, second, the oil was imported as "crude oil" (that is, in the form in which it is obtained from the wells) and was refined in Europe. The building of refineries, so conspicuous an investment in Britain since the war, has been equally conspicuous throughout Europe.

The reasons for all these developments are fairly familiar. Rapid expansion of demand (led by the U.S.A., whose consumption was over 60 per cent. of the world total in 1946) stimulated the opening up of new resources, where oil was known to be available in immense quantities obtainable for less effort than was needed for much new development in the U.S. Europe was short of dollars and wanted to reduce her bill for oil. The new pattern of development contributed in two ways: though Middle East oil required some dollars it required less than Western hemisphere oil, and local refining kept the cost of refining out of the overseas trading account (once the American component of the cost of building a refinery, which initially was high, had been met).

The development was as satisfactory for the large international oil companies as for the governments. New refineries were needed to meet the world demand, most of the companies had Middle East sources to develop, but it was easier and cheaper to build the new refineries near the market—and politically more secure. It was easier and cheaper, initially at any rate, because the necessary services—water, power, and so on—were there, or would be provided; it was not necessary to house all the staff and workers; and there were facilities for technical education and local markets for many of the kinds of labour they wanted. There are transport gains from refining near the market which grow progressively as larger tankers are used—they are much easier to use for the trade in crude than for the trade in products, for which markets are smaller.

The building of the refineries provided a new impulse to the use in Europe of the heavier fractions of the crude, sometimes called black oils, which remain after lighter fractions—especially motor spirit ("petrol")—and "middle distillates",

such as diesel oil, have been taken out of the crude. To the refineries these were residual products requiring vigorous marketing, with competitive price cutting, before consumption was established. From 1951 to 1956 Britain actually had a net export of fuel oil to other parts of Europe, where coal prices were higher and coal imports precarious, particularly in countries with no indigenous coal, like Sweden.

In countries with coal there was normally great resistance to substitution of oil for coal. Governments in Britain (and elsewhere for that matter) have blown hot and cold about it. In periods of coal scarcity, conversion from coal to oil was encouraged—but as a temporary measure until the coalmining industry's vitality and expansiveness could be fully restored. This was partly to give miners a sense that their employment was secure, partly to avoid external dependence and the need to make overseas payments, especially in dollars. Hence, for instance, when future motive power for railways was discussed in Britain, many argued against diesel traction because it required oil, whereas steam and electricity would both use indigenous fuel.

But periodic scarcities of coal have been so common—and have developed on occasion so quickly, as from 1954 to 1955—for the whole of Europe that this dichotomy in thinking has lost much of its force. It seemed to have gone completely at the peak of the boom in Europe in 1955. Experts appointed by the Organisation for European Economic Co-operation to peer into Europe's future needs of fuel and power were deeply impressed with the gap between the needs and the maximum supply that might be expected from Europe's coal (though some coal had been hard to sell on the Continent in 1954). Atomic energy would do little in the next twenty years. Coal imports from America were bound to be costly because, although f.o.b. prices were lower than even British coal prices, freights were heavy—and such imports required dollars. Oil was the obvious candidate to fill the gap: it was a better cargo, more easily handled, cheaper to transport, having a greater heating capacity per ton, and with special conveniences in use. If fuel was to be imported, why not oil? The new demand would be primarily for fuel oil, not motor spirit. The staff of the Economic Commission for Europe began to get worried at the same time that the way in which the oil industry was organized, and the way in which the price pattern of the United States tended to determine the price pattern in Europe (despite the fact that Europe got most of its oil from the Middle East) would check the development of

a more adequate supply of fuel oil to satisfy Europe's needs. No one doubted the oil existed in adequate quantities. The Middle East reserves, equal to over two-thirds of the known reserves of the world, were adequate, and were the cheapest to work. But was the organization of the industry properly "orientated" (to use the jargon) to supply what would become so vital a need, at a reasonable price?

## II

### FROM SUEZ TO IRAQ

The sense of urgency and uncertainty was still uppermost—still the fashion—when oil problems were being discussed at the time of Suez. The immediate alarms over oil supplies which the closing of the canal provoked were, as it can now be seen, exaggerated. One of the surprising aspects of the crisis (which was essentially a crisis over transport) was that so many people appear to have concluded that, because Europe's dependence on the Middle East for crude oil had become so pronounced, no alternative sources for part of the supply could be expanded. In the event, estimates of the difficulties to be faced turned out to be exaggerated, people were able to do with less oil, industrial output was not reduced and more oil could be obtained from the Western hemisphere quite quickly. A lot more could be forthcoming within a comparatively short time. All this should perhaps have caused less widespread surprise than it did.

When the troubles were over, the canal reopened, and the state of alarm had disappeared, the world seemed full of oil. American producers were left with large stocks following the decision, after government pressure and against the wishes of many of the small independent producers, to increase output (which in the United States is always subject to quantitative restraints sponsored by the States under conservation laws, lest supplies be too heavy in relation to demand). Stocks had also accumulated elsewhere, partly because tankers' programmes were put out of joint, but partly because many producers—especially in the Caribbean—were straining to supply more. A mild winter had kept demand down—and the expansion of Europe's economy which had been at its peak when the fuel forecasts of 1955 were made was from month to month proceeding more slowly. In America, the tailing off came sooner.

Even so, the volume of expansion projects to provide more oil—large in extent already before Suez—had been added to by the new stimulus. The British government had appointed a new



co-ordinator to see that all developments which would make oil supply more secure were expedited. The building of more tankers, more loading facilities, and the opening up of new parts of oilfields after new exploration, continued after demand was broadly satisfied and stocks had accumulated. While "conservation" policies have reduced American output and stocks, and the starting of new projects is now delayed, the plethora of new tankers reaching completion adds still to what has for some time been a surfeit, and new facilities are being finished when the old are not fully employed.

At the end of 1957, the total tanker tonnage was 50 million deadweight tons, and a tonnage of 33 millions was being built or on order. These ships, being not only bigger but better equipped and faster than the average existing tanker, represent an addition of capacity greater than the proportion of tonnage alone indicates. A lot of tankers have been laid up (500,000 tons of European tankers were laid up already by December, 1957), some orders for new ones cancelled, and other orders postponed.

The most striking instances of new development coming to fruition as demand falls off are in Venezuela. Output there has been rising steadily since the war, the main market for the oil being the East coast of the United States. Rising costs of development in the U.S. itself have made many of the smaller U.S. "independents" (who are mostly not small except by comparison with the international giants) try to get concessions. The Venezuelan government have at times been reluctant to give them: possibly they fear that too many concessions will lower prices or reduce reserves too fast. In 1956-57 many new concessions were sold, by auction and at what oil people commonly deemed extremely high prices, to consortia formed by U.S. independents. The demand at the time of Suez added drive to this (and raised the prices of concessions). The output of Venezuelan oil in 1957 reached 145 million tons—more, it has been pointed out, than that of the three largest Middle East producers (Kuwait, Saudi Arabia and Persia) put together. In 1955 it had been 113 million tons. Of last year's record output, 87 per cent. came from the three major firms—Standard (New Jersey), Shell and Gulf—and these have made further successful explorations. But this year several of the newcomers with concessions in the Lake Maracaibo area (now reached by ocean-going tankers) have had quick success in making rich finds of oil, and they want outlets. Important new pipeline facilities have also come into use or are nearing completion.

With all this successful exploration and these new facilities, output has nevertheless fallen from the peak of June, 1957, and the state of the U.S. domestic market virtually rules out the possibility of large new outlets there soon. American independents who do not have overseas interests are resolutely opposed to any increase in import quotas (which are agreed voluntarily in negotiations with the government, though some minor importers have at times refused to play).

Over 40 per cent. of Venezuela's output normally finds its market in the U.S., half as crude, half in products refined either in Venezuela itself or in Aruba, Curaçao or Trinidad. Venezuela is said now to be better fitted to satisfy the U.S. market when it again expands because much of the oil from new explorations is light. The most expansive market in the U.S. (despite the drop in motor car sales) is still for gasoline and light oils, not for fuel oil. That looks good for the future—but not immediately.

Venezuelan developments have a special interest because of their scale and because they are in the Western hemisphere. But they are not isolated. This autumn, for instance, new terminal facilities at Kuwait will almost double the tonnage of oil which can be handled there. Hitherto, output has been limited by the lack of such facilities; now it will be possible to load 95 million tons a year—a formidable total for one port. Improved terminal facilities are being built by the Iraq Petroleum Company, who will be able to load 65,000 ton tankers, and in Persia. Iraq has announced plans to enable it to produce 57 million tons of oil in 1961, compared with some 32 millions this year. There is no need to catalogue all the developments. Cumulatively, however, they do explain why the most recent Middle East crisis did not cause a flutter about oil.

For the immediate future, certainly, there was no reason why it should. What if one looks further ahead? Is the present flush supply of oil merely a reflection of excessive reaction to the fears of scarcity provoked first by the boom growth of 1955 and later by Suez? Or does it mean that there are now better long-period prospects of supply without steeply rising prices?

### III

#### WORLD FULL OF OIL

The answer to the last question, if it is confined to the physical circumstances and neglects the political, would almost certainly be yes. The pundits will say there has never been any doubt that immense reserves of oil exist, and no doubt they



are right. But the recent concentrations of effort in exploration, over a much wider field, combined with new techniques both of exploration and recovery, have confirmed the existence of much more oil, have brought it into the field of proved reserves, and have also made it possible to identify the existence of possible reserves, where exploration has not yet occurred or not been intensive, with far greater assurance over a far wider area.

Geophysical methods have been added to modern geological techniques in exploration, and the accumulation of geological experience has greatly added to our ability to identify the sedimentary areas of the type most likely to prove oil bearing. Modern methods allow oil to be recovered from much greater depths: in Texas the average new well in 1957 was nearly 5,000 feet deep, and in the Middle East some oil comes from below 10,000 feet, and the general trend there is to go deeper at greater cost. By checking the rate of flow in wells when they are new, and by using various methods, such as pumping back gas to increase underground pressures or even burning some oil underground to make heavy oils flow more readily, it has been possible to increase the yield from pools. In the early days this was as low as 20 per cent. of the oil available, but is now sometimes as high as 80 per cent.

The developments in Venezuela sketched in earlier have certainly given the possibility of larger outputs more quickly to new exploration than was widely expected. The exploration in the Sahara, pressed on no doubt with especial vigour for political reasons, has also yielded promising results; no one doubts that the flow of oil will be significant (though it is not another "Middle East"). Nigeria is promising, but possibly only as a small addition to world supplies (though some have spoken of it as a new Mexico). Exploration has shown that oil-bearing strata continue in the continental shelf off the coast in several regions, notably in the Caribbean and in the Middle East.

A remarkable feature of the last year or so has been the relative success of exploration in Europe, with some surprisingly optimistic views of possible further discoveries, alike of oil and of natural gas. An E.C.E. report published in 1954 said curtly that "Europe has relatively small oil resources", the chief exceptions being in Austria, Hungary and Rumania. An O.E.E.C. Report<sup>1</sup> published in February, 1958, takes a wholly different line. Since the earlier report there have been sensational discoveries of natural gas in Italy (in the Po basin) and

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<sup>1</sup> *The Search for and Exploitation of Crude Oil and Natural Gas in the O.E.E.C. Area.*

in Lacq in the south of France. The O.E.E.C. report stresses that fields with reserves of over 100 million barrels (14 million tons), which qualify statistically as "large oilfields", were *first* discovered in Europe *after* the war—at Schoonebeck (Netherlands), Ruhle (Germany), Matzen (Austria), Parentis (France) and Ragusa (Italy). Using American exploring experience as a guide it is concluded that sediment basins exist in the O.E.E.C. area in most parts, excluding only Norway, Iceland and part of Sweden, where oil and gas occurrences may well be found which are prolific. The exploring is all at a very early stage, but "the prospects . . . are bright". All this refers to oil which is "economically exploitable"—though this does *not* mean as cheap to obtain as the oil in the most favoured areas, above all the best regions in the Middle East.

In the United States itself, which still produces about half the world's total supplies of oil (though it also imports oil to satisfy the home demand), the most recent measure of reserves shows a decline—but this was only of reserves as represented by proven fields. The fall is due to the jaded state of markets after the stimulus of Suez had gone and recession had advanced, and to rising costs in many parts of the United States, which have made exploration overseas more attractive. There have been fewer test wells on the mainland but the exploration of the continental shelf of Louisiana has been extremely promising. There, and in the Rockies, proved reserves have risen, while interest is growing in the possibilities of new supplies from Alaska. In the last few years there has been an immense expansion in supplies of natural gas: the proved reserves have risen sharply. And there is a growing awareness in appreciation of the value of resources which are at the moment not economic to operate, but which provide immense further reserves—the Colorado shale deposits are the most important. In Canada, the Athabasca sands fall into the same category.

The most recent attempt at an estimate of the world's reserves of oil which are now commercially exploitable shows a remarkable advance on most earlier figures. It was made by Mr. Lewis G. Weeks, chief geologist of Standard (New Jersey). Including past production, according to a summary in *Petroleum Press Service*, Mr. Weeks estimates total ultimate potential resources of crude oil and natural gas liquids, recoverable by conventional primary producing methods under today's economic conditions, at 1,500 *billion* barrels, of which 240 billions are in the U.S.A. The total includes past production, to the end of last year, of about 100 billion barrels, and proved reserves

which at the end of 1956 were at least 325 billion barrels. Reserves expected to be proved amount therefore to 1,100 billion barrels. Of natural gas, the total ultimate recoverable resources are put at a minimum of 5,000-6,000 trillion cubic feet, the equivalent of 1,000 billion barrels of oil, and of these one-fifth are in the U.S.

These estimates do not include oil which "man may ultimately find ways of recovering by secondary methods" (reserves in this category may be as large again as those in Mr. Weeks' figure), nor do they include the shales and tar sands. The most recent estimate of oil in shale in the U.S. is 525 billion barrels in the richer shales, and twice this quantity in the poorer shales. Mr. Weeks' estimate of reserves of oil "recoverable in terms of current economics," which will be added to proved reserves in the Free World, is 70 per cent. higher than a responsible estimate made three years ago of reserves recoverable if today's price were *doubled*. This seems a measure of the increased optimism about world supplies. As to the distribution of the reserves, at least two-thirds are thought to be in the Eastern hemisphere, and one quarter of these in the U.S.S.R.

These figures—of proved and to be proved resources—must be read in conjunction with a current consumption of oil at a rate of 900 million tons or about 6.5 billion barrels a year. The *proved* reserves according to Mr. Weeks, and even according to other and lower estimates, are large in relation to the current consumption; but the reserves which Mr. Weeks expects to be proved would make it pointless in this generation to worry at all about this aspect of the oil industry—even if consumption continues to double every ten years.

#### IV

##### IS THERE A RISK OF RESTRICTION?

The question does arise, however, whether the distribution of the reserves is such that the countries in possession will be inclined to charge less favoured countries high—some would say extortionate—prices. Two main areas have an enormous portion of the proved reserves: the Middle East, according to Mr. Weeks, has 80 per cent. of the known reserves outside Russia. The Caribbean and American fields hold a large proportion of the remainder. Is it likely that all producers or royalty owners will think it to their advantage to check exploration development and production in order to force up the

price, and will find it possible to get together on a policy of restriction? In America, restriction is an official policy—in the name of conservation. There is in fact no danger of supplies being exhausted and, as seen earlier, the policy has as one of its avowed objects the relating of supply to forecasts of demand; moreover, imports are subject to quota, voluntary but none the less as part of government policy. The crude oil market is not characterized by free competition. There are, however, many unintegrated firms in the crude oil business. Refineries compete with each other to buy from these independents, and often compete vigorously in selling oil products. Is there any danger that restrictive policy in producing crude might extend outside the frontiers of the U.S.?

There are reasons for thinking this unlikely. A growing number of interests are involved, both among those who grant concessions and among producers, and the problem of finding common ground for agreement would be formidable. It is not as though the relatively small number of international companies which still control most of the exploitation outside the U.S. could determine what was done in concert, even should they wish to do so. They would, of course, be in great danger of U.S. anti-trust action if they did try—and they are nervous about joint discussion as it is. But many "independents" are now coming into the picture: there are, for example, the consortia referred to above in Venezuela; some U.S. consortia in the Middle East (one, for example, works the Wafra crudes near Kuwait); and Japanese and Italian companies have obtained Middle East concessions. Furthermore, in regard to developments which are in the hands of the big international companies, those who have granted the concessions are anxious for results. They, as well as new companies, are anxious to get a larger share of the oil business; they are not ready for static outputs with quotas based on a past in which they did not figure. Nor will new concessions be bought at prices not justified by the market for products: some new concessions have been bought at a high price, but there is no reason to expect that buyers will always find it worth paying more. There is, of course, often a nationalist interest in expansion—in Nigeria, for example, and North Africa. In many instances, as in many European countries, local production is likely to be expanded even if the oil is somewhat dear, if only for balance of payments reasons (which may be misguided) or for security (which may be basically sounder).

There is a prospect of other sources of power—especially nuclear—becoming steadily, though not at an early date dramatically, more important. Many of those who have the cheaper oil will therefore probably feel that the right line of policy is to increase their volume of sales as quickly as possible, which will counsel neither restriction nor high prices. If those whose oil is most cheaply produced—the Middle East suppliers for Europe, with Venezuela, rather dearer at source but much closer to American markets—wish to sell more oil quickly they can do so only in the large and growing markets of Europe and America. In this perspective the question, “Can Europe do without Middle East oil?”, is wholly misconceived. There is no prospect of the Middle East finding a large outlet in Russia. Russia is herself an exporter of oil (last year she exported 8 million tons), and one of the main centres of her oil, the Baku oilfield, is close to the Middle East fields. Russian reserves of oil are large, and recent announcements show that output is to be greatly increased by present plans. Not only, therefore, is there little reason to suppose that Middle East oil can be diverted by the U.S.S.R. away from its present markets by commercial means, but it is likely to meet with more competition from Russia itself.

Since the forecasts of the middle 'fifties, the oil prospect has not only been altered by the results of vigorous prospecting for oil. It has also been altered by the increased use of American coal in Europe, and in a different sense by the greater availability of natural gas in the U.S. as well as in parts of Europe. The natural gas supplies are basically linked with the oil developments and have been treated so above, but they are in large measure competitively separate forces. The import of U.S. coal into Europe is on such a large scale now that it cannot be looked upon as transitory, filling a gap. It has risen from 30 million tons in 1955 to 50 million tons in 1957. American coal is now cheaper than Ruhr coal, even in parts of Germany—the giant coastal steelworks at Bremen is to use American coal, possibly the new French steelworks planned for Dunkirk will do so too—and Italy gets more U.S. and less “Community” coal, with no doubt a price gain. For the moment Atlantic freights are still extremely low, but the advent of much bigger ships will make the average freight much smaller than formerly, and regularity in the trade will help. The Germans are anxious to see the import of U.S. coal checked.

No doubt for many purposes only oil will serve, while for others it is technically more attractive. Nevertheless, the

addition to coal supplies in Europe is a significant price influence—as it is also in the United States. On the Eastern seaboard, the competition between natural gas, coal and oil, notably in power stations, is a potent factor in keeping down the market for fuel oil, and keeping the price of fuel oil relatively low.

An interesting sidelight on the competition of imported coal with oil in Europe is possibly to be found in the singularly dispassionate way in which Dr. Regul, Deputy Director of the Economics Division of the High Authority of the European Coal and Steel Community, has recently set out statistically, in an address to the Operations Group of the Institute of Petroleum, the relative advantages of using fuel oil in place of coal. Dr. Regul gives a statistical value, not merely to the greater efficiency in various uses (because more of the heat generated is effectively utilized), but to less easily measurable advantages such as flexibility. Fuel oil starts with the advantage that the calorific value of one ton of oil equals that of 1.4 tons of coal. The complementary advantages independent of this arising from efficiency, flexibility, and other factors vary, according to Dr. Regul, from a ratio of 1 : 1.2 in, for example, steam raising and drying stoves for agriculture, to 1 : 1.5 in open hearth furnaces. On this showing, therefore, it is sometimes cheaper to use fuel oil when its price is twice that of coal.

The trend of prices in the Coal and Steel Community has been in favour of fuel oil, with much conversion from coal to oil occurring as a result. (The French nationalized coal industry has often seemed rather shocked at the growing use of "le fuel"). In view of the apparent profusion of oil supplies, especially in regions of relatively low cost, of the competition between sources and of the cheapening of transport by big tankers (which also lessens the power of transit countries to raise costs), the price movement may well be in the next decade, as in the last, in favour of oil against coal.

This seems the most probable trend. It might be influenced unfavourably by the effect of U.S. restriction—of production and imports—on the price of crude. But the margin within which this can happen is probably narrow. If producing companies, or those with concessions to dispose of in the low cost areas, were convinced that profitable expansion was being prevented by artificially high U.S. prices, the price link would break. So long as this is not happening it will be better for them to retain it. As it is, from a European point of view, the price relation means that Middle East crude oil is always cheaper in Europe than in the U.S.



## V

**WILL REFINERIES DO THE RIGHT JOB?**

There remains the final question whether in Europe the refining pattern will be so influenced by American prices that there is not a sufficient impetus towards maximizing the production of fuel oil. The problem arises because crude oil is capable of being refined in different ways which vary the proportions in which different finished products are made. All oil products are joint products, though there are specific costs involved in changing the proportions which can be treated as to some extent costs specific to particular products. The aim of refiners is broadly to make the net margin earned by the sale of all the finished products as high as possible: they are influenced by the fact that some sell at much better prices in a market than others. In the U.S., fuel oil has a low value because it has many competitors; the most profitable mass product is gasoline (which is used in the U.S. for commercial vehicles as well as for cars). The outcome of this is that there is usually no stimulus in the U.S. to make *more* than an unavoidable residue of fuel oil, though there is quite a large seasonal demand for this for space heating. As a consequence, when fuel oil is exported its price tends to be low, and this tends to set a low ceiling to prices for fuel oil in Europe.

I am inclined to think the influence of this has been exaggerated, because the price of fuel oil has itself been subject to much competition in Europe. It is hard to judge precisely how large a proportion of fuel oil has been sold at cut prices in order to build markets in Britain, but as British refinery outputs have been growing this has happened commonly. A time-lag must needs occur between the production of large new supplies and the development of markets: Dr. Regul says that the time-lag after prices favour the use of fuel oil in the E.C.S.C. is three years. People have to be persuaded and must then instal equipment. Readiness to use fuel oil has certainly been checked until recently by the practice of keeping down the price of coal by artificial restraints and averaging devices. This no doubt contributed to a situation in which the price of fuel oil has almost invariably been below the average value of imported crude oil, which naturally provided no incentive to instal refineries that would produce large quantities of fuel oil, in which fuel oil would no longer be residual.

Some have argued that the picture has been falsified by the charging of an excessively high price for Middle East oil.

Middle East operations have certainly been highly profitable—but also highly risky. A substantial part of the profit has been taken locally, or reinvested locally, and it is at least a dubious proposition that a more rapid expansion could have occurred had margins been much smaller, and if part or all of Middle East oil had been sold to Europe much more cheaply. The difference, if it was to encourage refining for fuel oil specifically, would have had to be very large indeed, outside the bounds of reasonable possibility.

In European refining it is noticeable already that firms do recognize that there is more scope for growth in the market for fuel oil, and in general in oil for industrial and domestic uses, than in transport. The market for motor spirit cannot be regarded as indefinitely extensible, especially in a geographically small market. Efforts to establish and expand other markets are consequently vigorous. It has become necessary indeed to find non-transport areas of use even for some of the light fractions—hence the recent great extension of the use of these in gas manufacture (though the basis of contracts allows for the use of almost any fractions). As the balance of markets shifts, the price of fuel oil and oils used for similar purposes must be expected to rise—which will progressively justify and encourage refining designed to further this.

Manifestly, there are some conflicting trends. A continuance of the inflow of cheap American coal would check the tendency to use more oil and to focus more refining on fuel oil. But the moderating influence of coal prices on oil prices as a world phenomenon is to be welcomed. It is certainly desirable that domestic coal prices, here and on the Continent, should not be kept artificially cheap, and that users should be able to make the choice between coal and oil on their merits. If demand for fuel and power rises, as the pundits say it will, the pressure for supplies will raise the prices people are willing to pay, and justify the channelling of investment into the production of crude oils most suitable for fuel oils, the installation of topping plants in the oilfields to take off light fractions and return them into the oil pools, and the building of refineries which provide fuel oil most economically.

Duncan Burn.

*London.*  
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## Forward Exchange: The Case for Intervention

By A. E. Jasay

TIME and again in the past few years lovers of paradox will have noted that, a generation after formally abandoning the gold standard, Britain today is as firmly anchored to it as ever. It is true that the pound is not fully convertible, particularly for residents and on capital account. It is true, too, that the central bank's note and deposit liabilities are not now automatically linked to its gold holdings. But these somewhat legalistic deviations from the standard negate its form more than its substance. In essence, being on the gold standard means that corrective responses to swings in a country's balance of payments are made *via* its internal monetary system, while being off the standard means that the size of the domestic money supply and the level of interest rates are largely independent of the balance of payments.

Off the standard, the response to a disequilibrium in the balance of payments can be made in a variety of ways. Some of these have to do with the right of the country's citizens to trade abroad at a fixed rate of exchange. Others involve direct controls over trade and spending at home. Yet another way is to have a big gold reserve, sit tight and see it run down from time to time. If this country has a deficit, other countries must have a corresponding surplus and are likely sooner or later to increase their imports; and provided our export prices are sufficiently attractive, a reasonable share of any such additional imports will be drawn from this country.

Unfortunately, this particular method—of simply paying for an adverse balance out of the reserve and waiting for the money to come back again—seems to be barred to Britain for two reasons: because the sterling area's central gold reserve is not very large to begin with, and because a peculiar significance has come to be attached to it by public opinion at home and abroad. The frame of opinion which—however mistakenly—regards any running down of the gold reserve as a danger signal will cause a further and cumulative fall in the reserve through withdrawals on capital account. The reserve cannot,

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therefore, be very freely used as a cushion; the ironical situation has arisen that, in order to have it on show in the window, Britain must manage her affairs almost as if she had no reserve at all.

At the same time, there are strong reasons for holding that import quotas, bilateral settlements and the rest in the international sphere, like direct rationing in the domestic sphere, are less potent medicines for curing balance of payments troubles than their immediate incidence might suggest. Admittedly, they can sometimes shift the spot in which the trouble manifests itself; they can, as it were, transform a feverish temperature into a dull headache. Whether this is desirable, and desirable enough to outweigh its cost in loss of consumer's choice and other freedoms, is likely to be settled on the political plane. In the past decade, the political decision has been going against it.

This has left, as the least unacceptable option, the basic gold standard method of dealing with imbalances in the external accounts. In principle, there are two ways in which the internal monetary system can perform the task of tipping the *current* external balance the right way round. One is *via* home employment and the scale of economic activity in general, the other *via* the price level. In "classical" gold standard days, the scale of employment was in principle regarded as compressible if necessary, but in actual practice it was unusual for balance of payments difficulties to result in much unemployment, for the reason that comparative price levels were responsive enough. Under the contemporary gold standard, on the other hand, employment must not carry the burden of adjustment, while the price level will not; for the full-employment guarantee itself tends to make the price level more rigid downwards than it would otherwise be.

The upshot is that today's "gold standard" mechanism—placed as it is in the uncongenial setting of an economy in which employment must not, and therefore prices will not, fall very readily—has come to be almost as much disliked as the prospect of its abandonment in favour of direct controls or another devaluation. To achieve even moderate improvements (or to prevent deteriorations) in the external balance on current account, money at home must be kept tight and dear for prolonged periods. Moreover, there are occasions when the need to keep it tight and dear, and thus to fortify the U.K. current account with the rest of the world, arises not out of any self-indulgence on the part of this country but out of independent adverse movements on capital account. Thus, particular

annoyance is felt about restrictive policies imposed on this country as the result of a stepping up of development expenditure in India or a false devaluation scare and an unreasonable flight from transferable sterling in Zürich.

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It is, of course, unfair to blame the gold standard for these discomforts. Given that other countries' economic policies are not within our control, we cannot adjust our current account to them except by bringing about real changes in our own economy. If the economy is resistant to such changes, it will take much discomfort to bring them about—though that does not make them any more avoidable if reserves are low. There is no obvious ground for believing that the required changes would encounter less resistance along the road of direct controls. However, while we may grant that a given set of economic changes cannot be achieved without some corresponding economic and political tears, there may still be room for genuine controversy about the sort of changes that are really required. Is it always necessary, and sensible, to seek the solution in the *current* account?

A large gold reserve may remove the need for adjustment to balance of payments troubles which are the result, loosely speaking, of fluctuations rather than of a trend. It could not shelter the economy from a long-run dollar problem (if indeed there was one); but it could legitimately be used in riding out short-run dollar problems of the kind that might follow in the wake of British investment booms or American recessions. A long-run deficit would have to be corrected by forcing the economy to make the necessary real responses in one way or another. But mere swings in the balance due, let us say, to an American boom or recession could be tolerated without the necessity for corresponding fluctuations in activity in Britain. Similarly, "bear" attacks on capital account could be left to die a natural death, and would not have to be choked off by painful and spectacular domestic measures. *But to the extent that the gold reserve is really untouchable, each fluctuation must be treated as if it were the trend itself*; the economy must be forced to make the same sort of response to it. The more frequent are the fluctuations, the more wasteful the gear changes for which they call.

"Tight money", it is fairly well agreed, *can* improve the current trade balance, though the amount of improvement one gets for each turn of the screw,—say, for each one per cent. increase in Bank Rate,—will be less in times of U.S. recession

than in times of U.K. boom. In either case, real national output is bound to be somewhat smaller than it could have been if the country could simply ignore short-period balance of payments swings. But even at the very best, when excessive demand at home is devouring resources and each tightening in monetary policy can cut down imports and step up exports to a considerable extent, the improvement thus achieved in the current trade balance will still not be a *net* one. It will at least partly be nullified by a worsening in the current invisible balance. This, of course, is due to the rôle played in the invisible account by the service charge on the sterling balances. Without going into detail, it is fairly clear that the greater the importance of the service charge on externally held debt in a country's international payments, the more violent must internal monetary policy be to produce a given *net* change in the current balance of payments.

### MANAGING THE CAPITAL ACCOUNT

Is this, however, the only way in which a gold standard type of régime can be operated? Or, to beg our original question again, are these real changes in overseas trade and in the international distribution of income between the U.K. and its creditors really necessary and unavoidable? Or, finally, could this country live with an unstable current account balance of payments by learning to manage the capital account in a stabilizing manner?

In principle, if current account surpluses and deficits, taking one year with another, are roughly equal, it should be possible to insulate the domestic scene from the current balance, no matter how unstable the latter may be. The troughs can be filled and the peaks pared off, not only by running the gold reserve down and up again, but also by borrowing in the trough and repaying in the peak. This was believed to have been one of the main ways in which the classical gold standard achieved its objectives in the face of merely temporary imbalances, the results being achieved by fluctuations in the level of domestic interest rates. To the extent that higher short-term rates expanded the supply of lending to, and reduced the amount of borrowing from, Britain, the need for changes in domestic employment or prices was lessened. The standard could be worked fairly painlessly because the supply of international lending was responsive to Bank Rate.

In contemporary conditions, however, it is probably far from being responsive. The question therefore arises whether there is a different way of operating the gold standard, and one

which would avoid reliance on changes in home rates of interest.

Now, one of the main reasons why variations in interest rates were so effective in the days of the genuine gold standard was that the maintenance of exchange parities at their existing level could be taken for granted. A transfer of funds from, say, New York to London would normally take the form of an outright sale of dollars and purchase of sterling. For the owners of funds, the only factor to be taken into account was the respective level of interest rates in New York and London; as soon as the yield obtainable on bills or other short-term investments in London rose above those obtainable on equivalent assets in New York, the owners of dollar funds would have an incentive to undertake the transfer.

Nowadays, we live in a world in which exchange risk matters. If short-term funds move between different financial centres it is most often on a "hedged" basis. Instead of an outright purchase of sterling, in other words, we have to think in terms of a purchase of spot sterling offset by a sale of forward sterling, so that when the transaction is completed the funds will again be in dollars and any exchange risk will have been covered from the outset. The cost of this protection against exchange risks is expressed in the forward discount on sterling and is an additional consideration for the owners of funds to take into account. The incentive to transfer funds across the Atlantic is no longer measured by the excess of interest rates in London over those in New York, but by this interest differential *less* the cost of exchange cover, which may at times be considerable. If bill rates in New York are 1 per cent. and in London 5 per cent., but the forward discount on sterling is equivalent to 3 per cent. per annum, then a holder of funds in New York can earn an additional 1 per cent. without incurring any exchange risk by placing his funds in London with the exchange covered forward. If interest rates in London rose to 6 per cent., the incentive to undertake such a transaction would rise to 2 per cent. But this would also be true if, without any change at all in interest rates in the two centres, the forward discount on sterling—the cost of exchange cover—were to fall to the equivalent of 2 per cent. per annum. In principle, a narrowing of the forward discount on sterling should have precisely the same effects on the movement of funds of this kind as a widening of the interest rate differential.

In practice, some positive differential in favour of London (after allowing for the cost of exchange cover) may be needed before substantial switches take place from dollar securities into sterling securities or *vice versa*; for not all investors in short

Middle East operations have certainly been highly profitable—but also highly risky. A substantial part of the profit has been taken locally, or reinvested locally, and it is at least a dubious proposition that a more rapid expansion could have occurred had margins been much smaller, and if part or all of Middle East oil had been sold to Europe much more cheaply. The difference, if it was to encourage refining for fuel oil specifically, would have had to be very large indeed, outside the bounds of reasonable possibility.

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Manifestly, there are some conflicting trends. A continuance of the inflow of cheap American coal would check the tendency to use more oil and to focus more refining on fuel oil. But the moderating influence of coal prices on oil prices as a world phenomenon is to be welcomed. It is certainly desirable that domestic coal prices, here and on the Continent, should not be kept artificially cheap, and that users should be able to make the choice between coal and oil on their merits. If demand for fuel and power rises, as the pundits say it will, the pressure for supplies will raise the prices people are willing to pay, and justify the channelling of investment into the production of crude oils most suitable for fuel oils, the installation of topping plants in the oilfields to take off light fractions and return them into the oil pools, and the building of refineries which provide fuel oil most economically.

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Off the standard, the response to a disequilibrium in the balance of payments can be made in a variety of ways. Some of these have to do with the right of the country's citizens to trade abroad at a fixed rate of exchange. Others involve direct controls over trade and spending at home. Yet another way is to have a big gold reserve, sit tight and see it run down from time to time. If this country has a deficit, other countries must have a corresponding surplus and are likely sooner or later to increase their imports; and provided our export prices are sufficiently attractive, a reasonable share of any such additional imports will be drawn from this country.

Unfortunately, this particular method—of simply paying for an adverse balance out of the reserve and waiting for the money to come back again—seems to be barred to Britain for two reasons: because the sterling area's central gold reserve is not very large to begin with, and because a peculiar significance has come to be attached to it by public opinion at home and abroad. The frame of opinion which—however mistakenly—regards any running down of the gold reserve as a danger signal will cause a further and cumulative fall in the reserve through withdrawals on capital account. The reserve cannot,

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At the same time, there are strong reasons for holding that import quotas, bilateral settlements and the rest in the international sphere, like direct rationing in the domestic sphere, are less potent medicines for curing balance of payments troubles than their immediate incidence might suggest. Admittedly, they can sometimes shift the spot in which the trouble manifests itself; they can, as it were, transform a feverish temperature into a dull headache. Whether this is desirable, and desirable enough to outweigh its cost in loss of consumer's choice and other freedoms, is likely to be settled on the political plane. In the past decade, the political decision has been going against it.

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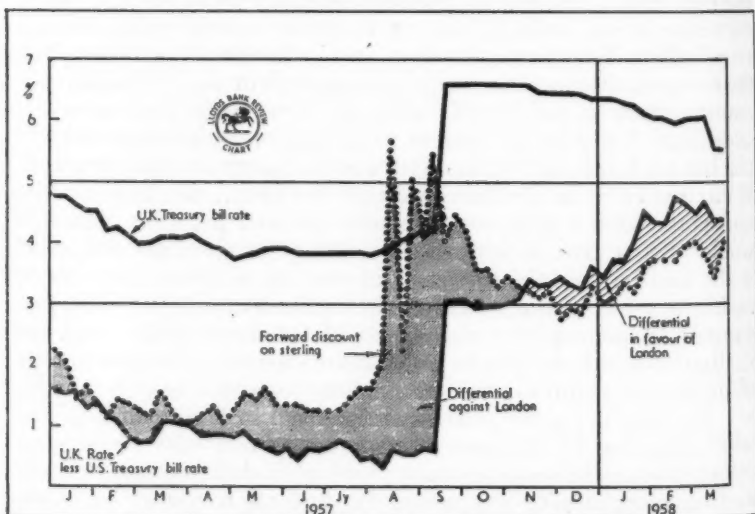
Now, one of the main reasons why variations in interest rates were so effective in the days of the genuine gold standard was that the maintenance of exchange parities at their existing level could be taken for granted. A transfer of funds from, say, New York to London would normally take the form of an outright sale of dollars and purchase of sterling. For the owners of funds, the only factor to be taken into account was the respective level of interest rates in New York and London; as soon as the yield obtainable on bills or other short-term investments in London rose above those obtainable on equivalent assets in New York, the owners of dollar funds would have an incentive to undertake the transfer.

Nowadays, we live in a world in which exchange risk matters. If short-term funds move between different financial centres it is most often on a "hedged" basis. Instead of an outright purchase of sterling, in other words, we have to think in terms of a purchase of spot sterling offset by a sale of forward sterling, so that when the transaction is completed the funds will again be in dollars and any exchange risk will have been covered from the outset. The cost of this protection against exchange risks is expressed in the forward discount on sterling and is an additional consideration for the owners of funds to take into account. The incentive to transfer funds across the Atlantic is no longer measured by the excess of interest rates in London over those in New York, but by this interest differential *less* the cost of exchange cover, which may at times be considerable. If bill rates in New York are 1 per cent. and in London 5 per cent., but the forward discount on sterling is equivalent to 3 per cent. per annum, then a holder of funds in New York can earn an additional 1 per cent. without incurring any exchange risk by placing his funds in London with the exchange covered forward. If interest rates in London rose to 6 per cent., the incentive to undertake such a transaction would rise to 2 per cent. But this would also be true if, without any change at all in interest rates in the two centres, the forward discount on sterling—the cost of exchange cover—were to fall to the equivalent of 2 per cent. per annum. In principle, a narrowing of the forward discount on sterling should have precisely the same effects on the movement of funds of this kind as a widening of the interest rate differential.

In practice, some positive differential in favour of London (after allowing for the cost of exchange cover) may be needed before substantial switches take place from dollar securities into sterling securities or *vice versa*; for not all investors in short

securities are equally alert, and even the alert may need education and experience in covered interest arbitrage before they respond in a big way to small interest incentives. Insofar as they do respond, however, it is clear that their response can be elicited not only by a rise in the London bill rate relative to New York (the forward discount remaining unchanged), but equally well by a narrowing of the forward discount, (the two bill rates remaining unchanged). In operating the gold standard, the right sort of changes in the forward discount are in many ways a perfect substitute for changes in Bank Rate, and in some ways superior to it.

The accompanying chart traces the course of (1) the U.K. Treasury bill rate, (2) the U.K. rate less the U.S. Treasury bill rate and (3) the forward discount on sterling, for several months before and after the August, 1957, exchange crisis. Broadly speaking, it shows that the forward discount, expressed as an annual rate, was greater than the excess of the British Treasury bill rate over the American rate for some time before the crisis, and very much greater during the actual crisis weeks before Bank Rate was raised to 7 per cent. Within a few weeks of this move the situation was reversed. With higher Treasury bill rates in this country and a decline in the forward discount on sterling, a holder of dollars was able to secure a somewhat higher return by investing in U.K. than in U.S. Treasury bills, even after covering the exchange risk. In the early months of 1958 the rapid decline in the U.S. Treasury bill rate helped to





increase the differential in favour of London, notwithstanding the decline in U.K. rates, and the positive differential in favour of London was maintained in spite of successive reductions in Bank Rate.

While the reserves were falling through the flight from sterling *via* the Kuwait gap and the transferable market, then, the constellation of interest and forward rates was such as to cause additional gold losses through arbitrage. The arbitrage element in the gold movements may not have been very large in either direction, but it certainly acted in a de-stabilizing manner; instead of "filling the trough and levelling off the peak" in the reserves, it tended, if anything, to deepen the trough and raise the peak. The forward discount, instead of changing in the required direction, changed in precisely the wrong way.

### INTERVENTION IN THE FORWARD MARKET

Forward exchange is a somewhat complex subject at the best of times, and in a turbulent period its ramifications can be quite confusing. With due respect for the British financial press, it must be said that its efforts at elucidating the 1957 events in what one journal called the "maze of the forward market" were less than fully successful. When in August and September, 1957, the forward discount on sterling against dollars widened to 5-6 per cent., and against German marks to 15 per cent. and more, many commentators welcomed this on the ground that at such a wide discount it was very expensive to be a bear of sterling. On reflection, however, it is surely clear that, while a wide discount may discourage speculative short selling of sterling, it must at the same time encourage outward arbitrage (which may take the form of "leads and lags" in commercial settlements) and the switching of convertible sterling balances into dollars and marks.

Now, short sales of sterling have no effect on the reserves; but outward arbitrage and conversion do. They imply a transfer of gold from the U.K. into the U.S. or German reserves. The public, and (one suspects) sometimes the authorities too, in their anxiety to see the harmless bears' blood, welcomed a widening of the forward discount at a time when this increased the pressure on the reserves and when a narrowing of the discount would have helped to reduce that pressure by motivating stabilizing movements of short-term funds.

Admittedly, if the spot sterling rate is officially managed but the forward rate is not, the forward discount will depend mainly on how people feel about the chances of holding the spot rate. Given the way they felt about it in the summer of 1957,

the discount was bound, in the absence of official intervention in the forward market, to slide in the wrong direction and thus to encourage outward flows accentuating the loss of gold from the reserves. Recalling that the forward discount is a kind of insurance premium against a depreciation of the spot rate, we cannot but expect it to widen in times of balance of payments stress: at such times many people want to insure the risk and few to underwrite it.

But the best judges of the authorities' intentions are the authorities themselves. There is thus a case for not leaving the provision of insurance against their intentions (i.e. against the risk of devaluation) entirely to the private market. If the authorities charged with maintaining the dollar parity would themselves come forward as providers of insurance, the cost of that exchange cover could be tailored to stop outward and promote inward arbitrage. So long as the whole burden is left for the private forward market to carry, the reverse will tend to happen; and the balance of payments on capital account will accentuate the drain on the gold reserve, obliging the economy to sweat out a so much bigger surplus on current account.

Management of the capital account through official forward exchange support, with a view to reducing swings in the gold reserve, is not without precedent. Last autumn, the Belgian reserves gained DM 200 millions through the official provision by the Belgian authorities of forward exchange cover to a German banking group, which was thus induced to buy Belgian Treasury bills. Had the German group tried to cover the exchange risk without official help, by selling forward francs against marks in the market, the whole or more than the whole of the interest incentive to undertake the deal would have been lost. A little later the head of the same banking group stated that the prohibitive cost of forward cover was preventing it from taking up British Treasury bills. It is not that foreign money markets were ill disposed towards sterling; the simple fact is that they were, and generally are, unwilling to carry exchange risks themselves, while lending to the U.K. with costly forward cover at times when gold is needed here tends to be unprofitable to them.

The case for judicious official support of the forward sterling rate, to lessen the periodic pains and burdens of holding the spot rate at its gold parity, thus boils down to resurrecting the full-fledged gold standard mechanism in a modernized guise. Under the classical gold standard, Bank Rate could draw gold from foreign money markets; today its power to do so is dubious and its use needlessly expensive both in terms of lost output and

of an increased service charge on foreign-held debt. The forward discount weapon, on the other hand, has no impact on home output or on the service charge on existing debt; it can be much more freely used for *the classical gold standard purpose of tapping foreign money markets.*

The most important of these, of course, is the American market. Given a reasonably responsive arbitrage mechanism, it could presumably be tapped, as occasion arose, through ordinary market processes and without explicit inter-governmental agreements. Technically, the official intervention suggested amounts to an offer by the British Exchange Equalization Account to buy U.S. short-term securities in exchange for U.K. short-term securities, combined with a forward exchange contract in the opposite direction. If a year of American recession meant a worsening in the sterling area's dollar balance by, say, \$500 millions, and if the U.K. chose to meet this, not by internal adjustments, but by borrowing through the arbitrage mechanism, the impact on the American money market would still be fairly negligible—equivalent to perhaps 1 per cent. of the short-term U.S. Federal debt held by commercial banks, savings banks, dealers and other investors. The difficulty of inducing arbitrage movements of this relative size, though it might take some educational effort and even intelligent salesmanship, should hardly be insuperable.

The standard objection to this mode of managing the exchanges is that, if the authorities were to hold the forward rate above the level which a distrustful market would establish on its own, they might have to absorb a large net volume of short forward sales of sterling by bears, over and above the forward sales which serve as insurance for actual sterling holdings. This is obviously true; but unless one's aim is a crusade against bears, it has little force as an objection. The bears, who hold no sterling, cannot "squeeze" the authorities; but the authorities can "squeeze" the bears by forcing them to deliver sterling which, in the last resort, must be bought from the Exchange Equalization Account. Matching the bears' short sales would bring revenue to the authorities equal to the forward discount on the amount of sterling so sold. So long as any such sales were matched officially, and thus prevented from depressing the forward rate again, they could have neither a direct nor even an indirect effect on the reserves, either at the time they were made or at the time the forward contracts matured. The only money that changes hands on the maturity of bear contracts made when sterling is standing at a discount is the difference, which the bears must pay, between the rate at

which the sterling was sold forward and the actual spot rate ruling at the time the contract matures. For example, let us suppose that at a time when the spot rate is \$2.80 and the forward discount is equivalent to 4 per cent. per annum, a bear makes a three months' forward sale of sterling he does not possess i.e., he sells sterling forward at 1 per cent. less than its spot value, equivalent to a rate of about \$2.77 $\frac{1}{4}$ . Three months later he has to make delivery of this sterling. If the spot rate at the time is still \$2.80, the cost of the operation to him—which means the profit to the Exchange Equalization Account, if it had supplied the forward counterpart—will be 2 $\frac{3}{4}$  U.S. cents on each pound, or about 1 per cent. of the value of the sterling sold (ignoring differences between buying and selling rates and any dealing costs).

Of course, if the forward sterling rate had been at a premium, it is the Exchange Equalization Account that would have to pay the difference—unless the spot rate had shown an improvement, over the period of the contract, equivalent to the premium. In either event, the difference to be settled would only be a sideline affair. One may sympathize with the malaise of the exchange authorities at the prospect of having to sell forward very large amounts of dollars to match all forward sales of sterling by bears; but these are mere paper commitments which do not, in fact, increase their real liabilities in any way.

\* \* \*

Another objection, which seems implicit in the authorities' fear that the forward exchange weapon might backfire, is that they can only guess, but never tell for certain, whether a forward sale of sterling was made by a "bear" or by an actual holder of spot sterling. In the latter case, the forward contract does represent a contingent liability on the Exchange Equalization Account's reserves; for upon its maturity, the seller may choose to surrender his sterling holding and walk off with spot dollars.

The answer to this is simply that he does not need a forward contract to do so. If he holds convertible<sup>1</sup> sterling, he can convert it into dollars any time. In a devaluation panic, he will hurry to beat the authorities to it, and convert now. However, if the forward discount on sterling is not prohibitively wide, he may decide to stay in sterling despite the devaluation fears, covering himself by its sale forward. If the worst happens and devaluation takes place, he will thus not lose by holding sterling, because he can collect his forward insurance. If, on the other

<sup>1</sup> "Convertible" means different things to different people. In our context, it means American or transferable account sterling, as well as sterling which can be used, within the scope of existing restrictive regulations, to finance commercial "leads and lags".

hand, devaluation fears prove groundless, he will merely pay the insurance premium (the forward discount) to the EEA and go on holding sterling. The only difference the availability of cheap forward cover makes to his position is that it becomes rather less risky for him to hold convertible sterling balances at times of pressure on the pound. Therefore, if forward support of the pound makes any difference on balance to the conduct of holders of sterling, it should reduce the dimensions of their flight into other currencies. The contingent liability on the reserves, however, is there all the time whether or not it takes the form of forward contracts made by others than "bears", for it is always equal to the stock of such spot sterling which its holders could convert into dollars if they chose to. There is no apparent reason why more of them should avail themselves of this right when sterling is supported forward than when it is not—the contrary is, if anything, more probable.

#### THE RÔLE OF BANK RATE

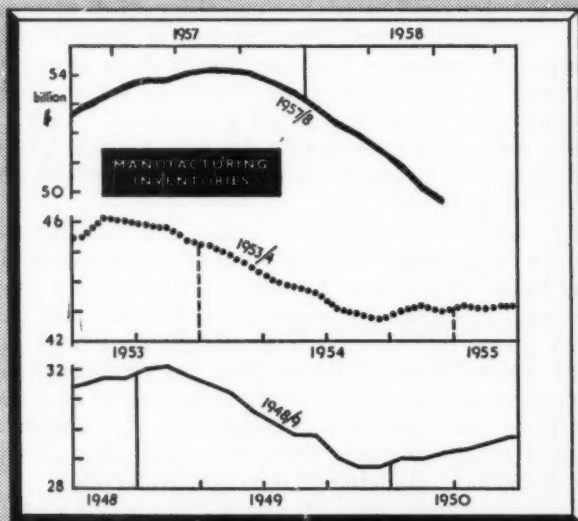
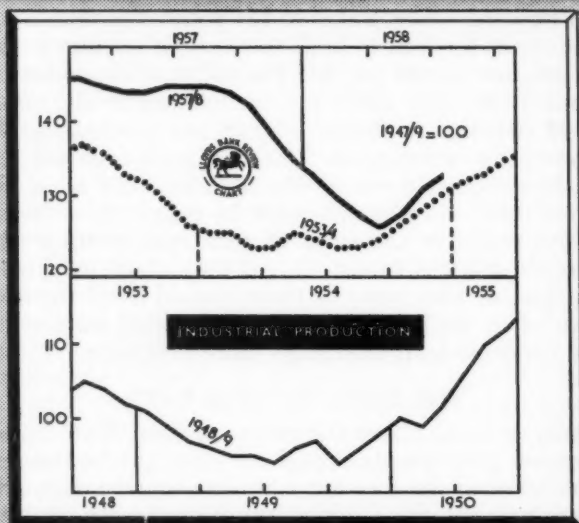
Finally, a word about the future of Bank Rate under such a modernized gold standard régime. It might be thought that if manipulation of the forward rate can achieve as much as or more than manipulation of short interest rates, we might as well return to the system of a bill rate of 10/6 per cent. However, this is a somewhat rash view. For one thing, if short-term funds were to be attracted rather than repelled in periods of balance of payments weakness, a bill rate lower than that ruling in overseas centres would have to be combined with a substantial forward premium on sterling; and a premium at such a time might look somewhat puzzling to the very people whose funds it was designed to draw in. Confidence in forward contracts might even be impaired.

More important, however, is the fact that forward exchange policy could never relieve interest rates of any domestic function they may fulfil. What these functions are to be is a matter for domestic economic policy to decide. All that forward exchange policy can do in this context is to permit that decision to be taken with some degree of liberty from external considerations. In the face of an unstable balance of payments and an irreducible gold reserve, it can enable the authorities to play a more refined kind of gold standard game than one which has to aim at a crude short-period balancing of the current account.

A. E. Jasay.

*Nuffield College,  
Oxford.  
August, 1958.*

## U.S.A.: EXPERIENCE IN THREE RECESSIONS



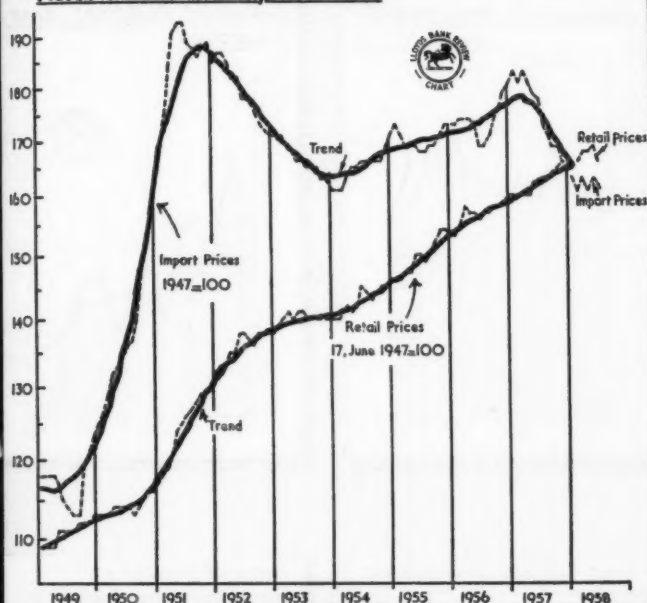
SOURCE: Survey of Current Business.

U.S. industrial production has risen in four successive months since April and is about half way back to the level of early 1957. Up to July, however, there had been no check to the decline in manufacturing inventories.

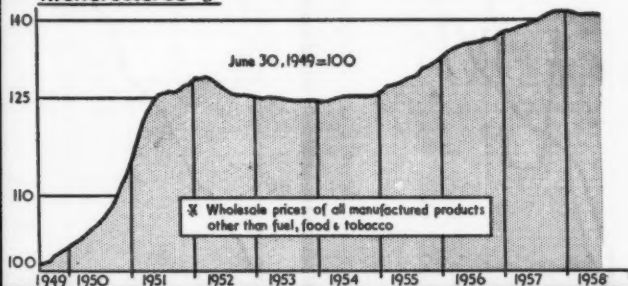


# PRICES

## Retail Prices and Import Prices



## Manufactures %



SOURCES: Board of Trade Journal.  
Ministry of Labour Gazette.

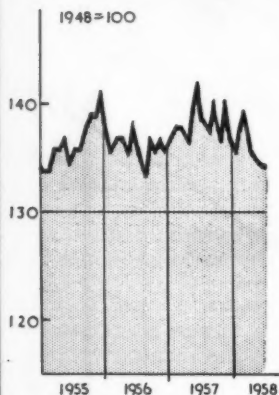
NOTE: The above charts are drawn on a logarithmic scale.

Import prices have fallen sharply over the past year and are now at their lowest level since the beginning of 1954. Although this has not so far been reflected in any significant fall in retail prices, the Chancellor has suggested that, as lower material costs work through the productive system, there may well be "some widespread price reductions in the shops". The average wholesale price of manufactured goods has been virtually stable since the summer of 1957.

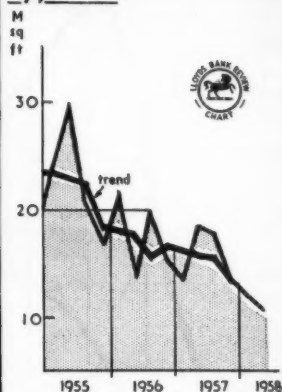
# U.K. ECONOMY

SOME LEADING INDICATORS

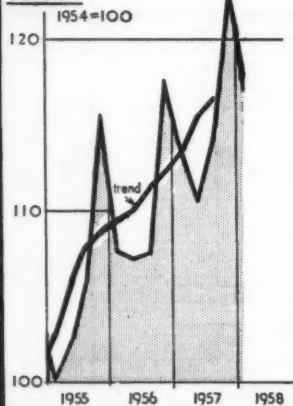
## Industrial Production\*



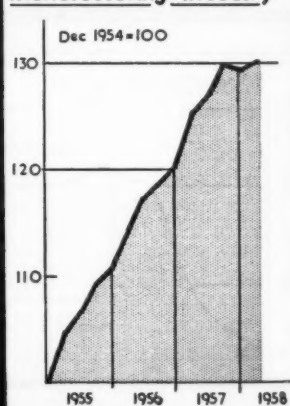
## Industrial Building: Area Approved



## Fixed Capital Investment: Volume



## Value of Stocks in Manufacturing Industry



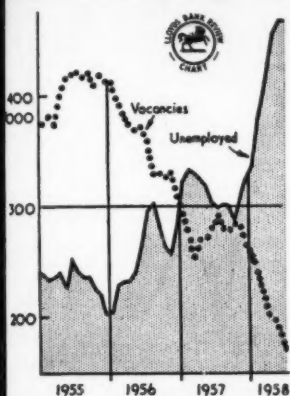
SOURCES: Monthly Digest of Statistics  
Board of Trade \* Seasonally adjusted

Until recently, industrial production has been running at about the same level since 1955. Declines in some industries, however, e.g. bricks and textiles, have been offset by rising output in others, such as chemicals and vehicles. Fixed capital investment has continued to increase (up to the first quarter), but at a diminishing rate.

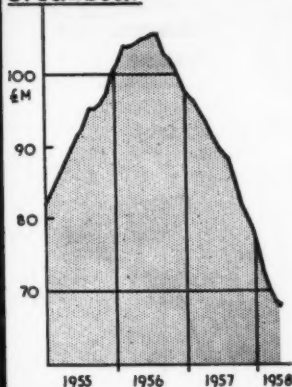
# U.K. ECONOMY

SOME LEADING INDICATORS

**Unemployment & Vacancies x**

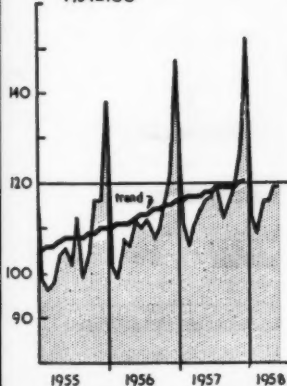


**Machine Tools: Value of Order-book**

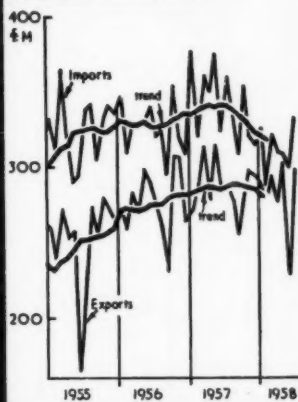


**Retail Sales**

1954=100



**Overseas Trade**

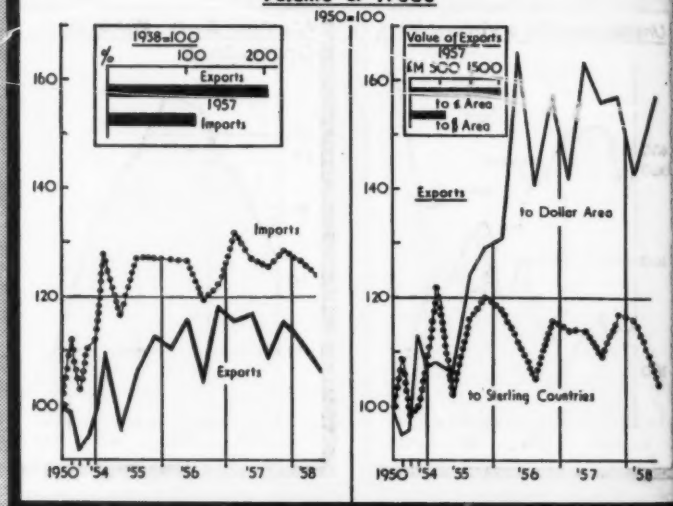


SOURCES: Monthly Digest of Statistics, Board of Trade Journal. x Seasonally adjusted.

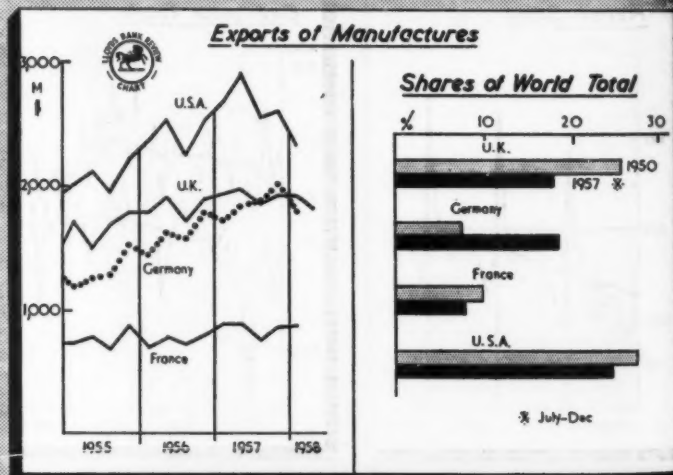
While vacancies have declined and unemployment has risen in recent months, the amount of unemployment in August (allowing for seasonal factors) was equivalent to a national average of not much over 2 per cent.

# OVERSEAS TRADE

## Volume of Trade



## Exports of Manufactures



SOURCES: Report on Overseas Trade  
Board of Trade Journal

Exports to the dollar area in the second quarter rose to over 50 per cent. of the 1950 volume, compared with a sharp fall in shipments to the sterling area. Our share of world exports, though recently rising slightly, has on balance fallen from 26 per cent. in 1950 to 18 per cent. in the second half of last year.

/

58

30  
1  
0

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share of  
er cent.